TABLE OF CONTENTS

United States Department of Energy / Savannah River Site

SC1 890 008 989

Aiken, Allendale, and Barnwell Counties

MODULE VII

SOLVENT STORAGE TANKS S33-S36 FACILITY

MODULE VII

SOLVENT STORAGE TANKS S33-S36 FACILITY

Module VII.

VII.A. MODULE HIGHLIGHTS

The conditions of Module VII apply to the storage of mixed waste in the Solvent Storage Tanks (SST) S33-S36 Facility. The Solvent Storage Tanks (SST) S33-S36 Facility is located near H-Area and consists of four underground double-walled, carbon steel storage tanks (cylindrical-horizontal with dished ends) and ancillary equipment including a transfer line (flushed and blanked), its associated pumps, and a 300-gallon carbon steel decanter tank. All ancillary equipment is aboveground. The tanks are equipped with liquid level gauges, high liquid level alarms, leak detectors, pressure gauges, and a cathodic protection system. Temporary transfer lines used to transfer waste from trucks to the tanks are on-ground in the diked area.

Each tank has a capacity of 30,000 gallons with an operating capacity of 27,600 gallons. **The tank system was installed in 1995.** The facility was designed to store mixed waste solvent and non-hazardous radioactive waste solvent until environmentally acceptable treatment and disposal methods are available. Mixed waste is a subcategory of hazardous waste and contains both a hazardous component, as defined by the Resource Conservation and Recovery Act (RCRA), and a radioactive component.

The secondary containment system consists of the annular space between the walls of the double-walled tanks. The annular space is equipped with leak detection equipment that trigger alarms in the control panel when liquid is detected.

A complete description of the SST S33 – S36 Facility can be found in Volume XXV of the approved 2013 RCRA Permit Renewal Application (Permit Application).

Special permit conditions can be found in Section VII.J. of this module.

VII.B. PERMITTED AND PROHIBITED WASTE IDENTIFICATION

VII.B.1. Permitted Waste Storage

The Permittee may store a total volume of 110,400 gallons of hazardous waste in 4 tanks, subject to the terms of this Permit and as follows:

Tank No. & Location	Capacity [gallons]	Dimensions of Tank	Secondary Containment Required	Maximum Specific Gravity	Description of Hazardous Waste	Hazardous Waste Number
SST S-33	27,600	12 ft (diam) x 42 ft	yes - in place	1.5	Mixed Waste Solvent	D004-D011 D0018-D043 7777
SST S-34	27,600	12 ft (diam) x 42 ft	yes - in place	1.5	Mixed Waste Solvent	D004-D011 D0018-D043 7777
SST S-35	27,600	12 ft (diam) x 42 ft	yes - in place	1.5	Mixed Waste Solvent	D004-D011 D0018-D043 7777
SST S-36	27,600	12 ft (diam) x 42 ft	yes - in place	1.5	Mixed Waste Solvent	D004-D011 D0018-D043 7777

VII.B.2. Prohibited Waste Storage

VII.B.2.a. The Permittee is prohibited from storing hazardous waste that is not identified in Permit Condition VII.B.1.

VII.B.2.b. The Permittee is prohibited from storing waste that is ignitable, reactive or incompatible.

VII.C. SECONDARY CONTAINMENT AND INTEGRITY ASSESSMENTS

VII.C.1. Tank Systems With Secondary Containment

VII.C.1.a. The Permittee shall design, construct, and operate the secondary containment system, in accordance with the detailed design plans and descriptions contained in Volume XXV **of the approved Permit Application.** [R.61-79.264.193(b)-(f)]

VII.C.1.b. The Permittee shall have an assessment performed on all new or replacement tank systems (unless the replacement is in-kind) as required by R.61-70.264.192. This assessment shall be submitted to the Department and approved prior to tank operation.

VII.D. OPERATING REQUIREMENTS

VII.D.1. Damage Protection

The Permittee shall not place hazardous wastes or treatment reagents in the tank system if they could cause the tank, its ancillary equipment, or a containment system to rupture, leak, corrode, or otherwise fail. The Permittee shall protect the tank systems from accelerated corrosion, erosion, or abrasion as required by R.61-79.264.194(a), and as specified in Volume XXV **of the approved Permit Application**.

VII.D.2. Spill and Overflow Prevention

The Permittee shall use appropriate controls and practices to prevent spills and overflows from tanks or containment systems as required by R.61-79.264.194(b), and by the methods specified in Section Volume XXV **of the approved Permit Application**.

VII.D.3. Air Emission Standards

The Permittee shall insure that all hazardous waste placed in tanks is managed so that compliance with R.61-79.264.200 is met.

VII.E. RESPONSE TO LEAKS OR SPILLS

In the event of a leak or a spill from the tank system, from a secondary containment system, or if a system becomes unfit for continued use, the Permittee shall remove the system from service immediately and complete the following actions: [R.61-79. 264.196(a)-(f)]

VII.E.1. Spill or Leak Cessation

Stop the flow of hazardous waste into the system and inspect the system to determine the cause of the release.

VII.E.2. Spill or Leak Material Removal

Remove waste and accumulated precipitation from the system within 24 hours of the detection of the leak to prevent further release and to allow inspection and repair of the system. If the Permittee finds that it will be impossible to meet this time period, the Permittee shall notify the Department and demonstrate that the longer time period is required. If the collected material is a RCRA hazardous waste, it must be managed in accordance with all applicable requirements of R.61-79, Parts 262-264. The Permittee shall note that if the collected material is discharged through a point source to U.S. waters or to a POTW, it is subject to requirements of the Clean Water Act. If the collected material is released to the environment, it may be subject to reporting under 40 CFR Part 302.

VII.E.3. Spill or Leak Cleanup

Contain visible releases to the environment. The Permittee shall immediately conduct a visual inspection of all releases to the environment and based on that inspection: (1) prevent further migration of the leak or spill to soils or surface water and (2) remove and properly dispose of any visible contamination of the soil or surface water.

VII.E.4. Tank System Closure or Repair

Close the system in accordance with the Closure Plan in Volume XXV of the approved Permit Application unless the following actions are taken:

VII.E.4.a. For a release caused by a spill that has not damaged the integrity of the system, the Permittee shall remove the released waste and make any necessary repairs to fully restore the integrity of the system before returning the tank system to service.

VII.E.4.b. For a release caused by a leak from the primary tank system to the secondary containment system, the Permittee shall repair the primary system prior to returning it to service.

VII.E.4.c. For a release to the environment caused by a leak from the aboveground portion of the tank system that does not have secondary containment, and can be visually inspected, the Permittee shall repair the tank system before returning it to service.

VII.E.4.d. For a release to the environment caused by a leak from the portion of the tank system component that is not readily available for visual inspection, the Permittee shall provide secondary containment that meets the requirements of R.61-79. 264.193 before the component can be returned to service.

VII.E.4.e. If the Permittee replaces a component of the tank system to eliminate the leak, that component must satisfy the requirements for new tank systems or components in R.61-79.264.192 and 264.193.

VII. E.5. Tank System Repair Certification

For all major repairs to eliminate leaks or restore the integrity of the tank system, the Permittee must obtain a certification by an independent, qualified, registered professional engineer that the repaired system is capable of handling hazardous wastes without release for the intended life of the system before returning the system to service. Examples of major repairs are: installation of an internal liner, repair of a ruptured tank, or repair or replacement of a secondary containment vault.

VII.F. INSPECTION SCHEDULES AND PROCEDURES

VII.F.1. Inspection Schedule

The Permittee shall inspect the tank systems, in accordance with the Inspection Schedule, in Volume XXV **of the approved Permit Application**, and shall complete the items in Permit Conditions VII.F.2, VII.F.3., and VII.F.4. as part of those inspections.

VII.F.2. Overfill Control Inspection

Permittee shall inspect the overfill controls, in accordance with the Inspection Schedule in Volume XXV **of the approved Permit Application.** [R.61-79. 264.195(a)]

VII.F.3. Other Tank System Component Inspection

The Permittee shall inspect the following components of the tank system once each operating day: [R.61-79. 264.195(b)]

VII.F.3.a. Aboveground portions of the tank system, if any, to detect corrosion or releases of waste;

VII.F.3.b. Data gathered from monitoring and leak detection equipment (e.g., pressure or temperature gauges, monitoring wells) to ensure that the tank system is being operated according to its design;

VII.F.3.c. Construction materials and the area immediately surrounding the externally accessible portion of the tank system, including the secondary containment system, to detect erosion or signs of releases of hazardous waste (e.g., wet spots, dead vegetation).

VII.F.4. Cathodic Protection System Inspection

The Permittee shall inspect cathodic protection systems, in accordance with the following schedule: [R.61-79. 264.195(c)]

VII.F.4.a. The proper operation of the cathodic protection system must be confirmed within six months from initial installation and annually thereafter; and

VII.F.4.b. All sources of impressed current must be inspected and tested every other month.

VII.F.5. Cathodic Protection System Inspection Documentation

The Permittee shall document compliance with Permit Conditions VII.F.2. through VII.F.4. and place this documentation in the operating record for the facility. [R.61-79. 264.195(d)]

VII.G. RECORDKEEPING AND REPORTING

VII.G.1. Immediate Tank or Spill Report

The Permittee shall report to the Department, within 24 hours of detection, when a leak or spill occurs from the tank system or secondary containment system to the environment. [R.61-79. 264.196(d)(1)] (A leak or spill of one pound or less of hazardous waste, that is immediately contained and cleaned-up, need not be reported.) [R.61-79. 264.196(d)(2)] (Releases that are contained within a secondary containment system need not be reported). If the Permittee has reported the release pursuant to 40 CFR Part 302, this report satisfies the requirements of this Permit Condition. [R.61-79. 264.196(d)(1)]

VII.G.2. Followup Leak or Spill Report

Within 30 days of detecting a release to the environment from the tank system or secondary containment system, the Permittee shall report the following information to the Department: [R.61-79. 264.196(d)(3)]

VII.G.2.a. Likely route of migration of the release;

VII.G.2.b. Characteristics of the surrounding soil (including soil composition, geology, hydrogeology, and climate);

VII.G.2.c. Results of any monitoring or sampling conducted in connection with the release. If the Permittee finds it will be impossible to meet this time period, the Permittee should provide the Department with a schedule of when the results will be available. This schedule must be provided before the required 30-day submittal period expires;

VII.G.2.d. Proximity of downgradient drinking water, surface water, and populated areas; and

VII.G.2.e. Description of response actions taken or planned,

VII.G.3. Tank System Repair Certification

The Permittee shall submit to the Department all certifications of major repairs to correct leaks within seven days from returning the tank system to use. [R.61-79. 264.196(f)]

VII.G.4. Design and Installation Certification

The Permittee shall obtain, and keep on file at the facility, the written statements by those persons required to certify the design and installation of the tank system. [R.61-79. 264.192(g)]

VII.G.5. Tank System Integrity Assessment

The Permittee shall keep on file at the facility the written assessment of the tank system's integrity. [R.61-79.264.191(a)]

VII.H. CLOSURE AND POST-CLOSURE CARE

VII.H.1. Closure Procedures

At closure of the tank system(s), the Permittee shall follow the procedures in the Closure Plan in Volume XXV **of the approved Permit Application**. [R.61-79. 264.197(a)]

VII.H.2. Inability to Close By Removal Or Decontamination

If the Permittee demonstrates that not all contaminated soils can be practically removed or decontaminated in accordance with the Closure Plan, then the Permittee shall close the tank system(s) and perform postclosure care in accordance with the closure and postclosure care requirements that apply to landfills (i.e. R.61-79.264.310).

VII.I. COMPLIANCE SCHEDULE

Specific compliance dates for this module are included in Appendix D - Additional Compliance Dates.

VII.J. SPECIAL CONDITIONS

VII.J.1. None at this time.

VII.J.2.